

Attorney Docket No. 26742.3.02

CLAIMS

1. A method of allocating network resources, the method comprising:
- creating a model of a plurality of network nodes, a plurality of network links, and a plurality of trunks,
 - determining an arc capacity for each commodity of a plurality of commodities;
 - determining a maximum flow of the commodity;
 - updating a link load; and
 - mapping a solution on the network resources.
2. The method of claim 1, wherein the model includes:
- setting a plurality of ingress nodes to a plurality of demand nodes;
 - setting a plurality of egress nodes to a plurality of supply nodes; and
 - setting a plurality of flow units of a demand and supply pair to a number of trunks between a corresponding ingress and egress pair.
3. The method of claim 2, wherein at least two egress nodes are set to one ingress node.
4. The method of claim 1, wherein the determining the arc capacity is done by subtracting a total load on a link from a total bandwidth of the link and dividing by a bandwidth of the commodity *and rounding down to the closest integer.*
5. The method of claim 1, wherein the updating the link load includes setting the link load to the total flow on the link multiplied by the bandwidth and adding an existing load on the link.
6. A computer software system of allocating network resources, the system comprising:
- computer instructions to create a model of a plurality of network nodes, a plurality of network links, and a plurality of trunks,

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computer instructions to determine an arc capacity for each commodity of a plurality of commodities; determining a maximum flow of the commodity;
computer instructions to update a link load; and
computer instructions to map a solution on the network resources.

7. The system of claim 6, wherein the computer instructions to create model includes:
computer instructions to set a plurality of ingress nodes to a plurality of demand nodes;

computer instructions to set a plurality of egress nodes to a plurality of supply nodes; and

computer instructions to set a plurality of flow units of a demand and supply pair to a number of trunks between a corresponding ingress and egress pair.

8. The system of claim 7, further including computer instructions to set at least two egress nodes to one ingress node.

9. The system of claim 6, wherein the computer instructions to determine the arc capacity includes subtracting a total load on a link from a total bandwidth of the link and dividing by a bandwidth of the commodity *and rounding down to the closest integer. Halim*

10. The system of claim 6, wherein the computer instructions to update the link load includes computer instructions to set the link load to the total flow on the link multiplied by the bandwidth and adding an existing load on the link.

11. A method of allocating network resources, the method comprising:

creating a model of a plurality of network nodes, a plurality of network links, and a plurality of trunks, wherein creating the model includes:

setting a plurality of ingress nodes to a plurality of demand nodes;

setting a plurality of egress nodes to a plurality of supply nodes; and

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setting a plurality of flow units of a demand and supply pair to a number of trunks between a corresponding ingress and egress pair;

determining an arc capacity for each commodity of a plurality of commodities;

determining a maximum flow of the commodity;

updating a link load; and

mapping a solution on the network resources.

12. The method of claim 11, wherein at least two egress nodes are set to one ingress node.

13. The method of claim 11, wherein the determining the arc capacity is done by subtracting a total load on a link from a total bandwidth of the link and dividing by a bandwidth of the commodity, *and rounding down to the closest integer*
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14. The method of claim 11, wherein the updating the link load includes setting the link load to the total flow on the link multiplied by the bandwidth and adding an existing load on the link.